

REMARKS

In accordance with the foregoing, claim 1 has been amended, claims 45 and 46 have been added, and claim 7 has been canceled without prejudice or disclaimer. No new matter is presented in this Amendment. Therefore, claims 1-6, 8-12, and 14 are pending and reconsideration is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §112:

Claims 1-12 and 44 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. According to the Office Action, the recitation of "a current collector having pores comprising at or greater than 60% porosity and less than 90% porosity based on an overall volume of said current collector" is not in the original disclosure. When alerted to the fact that claims 3 and 4 of the original disclosure do, in fact, recite this particular subject matter, the Examiner suggested that there is no support for the claimed "less than 90% porosity." For support, the Examiner noted that claim 4 reads, "the pores of said current collector comprise at least 80 to 90% porosity," and concluded that the term "at least" only "sets a lower limit on the porosity, but not an upper limit on the porosity."

Responsively, applicants respectfully assert that the Examiner's reasoning is flawed. The flaw is due to the fact that, in concluding that the term "at least" only "sets a lower limit on the porosity, but not an upper limit on the porosity," the Examiner improperly ignores the claim term "to 90%." Thus, the Examiner unreasonably interprets the claim language. In other words, the Examiner's interpretation of original claim 4 is as though the claim recited only that the current collector comprises at least 80% porosity which the claim clearly did not.

Thus, since the Examiner must interpret original claim 4 as including the term "to 90%" and, since the inclusion of this term necessarily leads to the conclusion that the subject matter of the claim finds support in the original disclosure, applicants respectfully assert that these rejections are overcome.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1-5, and 9-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chu et al. (U.S. Patent 6,030,720) in view of Peled et al. (US Patent 4,410,609), claims 6-8, and 44 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chu et al. (U.S. Patent 5,686,201) in view of Peled et al. (US Patent 4,410,609) as applied to claims 1 and 5 above, and further in view of Kawakami (US Patent 6,475,664). These rejections are overcome.

Regarding the rejection of claim 1, it is noted that claim 1 recites a current collector

having pores comprising at or greater than 60% porosity and less than 90% porosity based on an overall volume of said current collector; and a positive active mass comprising a sulfur-based active material, a conductive agent, and a binder selected from the group consisting of a polyvinylidene fluoride (PVDF), a UV-curable vinyl polymer, and a polymethylmethacrylate (PMMA) disposed in the pores of said current collector. According to the claim, the current collector comprises one of a metal foam having the pores and a non-woven fabric coated with a metal to provide the pores.

Calling attention to the recitation of "a binder selected from the group consisting of a polyvinylidene fluoride (PVDF), a UV-curable vinyl polymer, and a polymethylmethacrylate (PMMA)," it is noted that none of the references disclose the claimed binders.

Thus, applicants respectfully assert that claim 1 is patentably distinguished over any combination of the references and that, therefore, the rejection of claim 1 is overcome.

Regarding the rejections of claims 2-12 and 44, it is noted that these claims depend from claim 1 and that the additional references used to reject these claims fail to cure the defects of the references used to reject claim 1. Thus, the rejections of these claims are overcome for at least the reasons set forth above.

CONCLUSION:


There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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Date: 5/19/06

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